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## PATENT APPLICATION

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Atty. Docket No.: 2654-005US

Martin A. COTTON

Serial No.: 09/786,787

Filed: March 9, 2001

Group Art Unit: 2827

Conf. No.: 6559

Examiner: T. Dinh

Title: NON-CIRCULAR MICRO-VIA

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AUG 16 2002

TECHNOLOGY CENTER 2800

## AMENDMENT UNDER 37 C.F.R. § 1.111

Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

The following remarks are respectfully submitted in reply  
to the Office Action mailed July 5, 2002.

IN THE ABSTRACT:

An Abstract of the Disclosure is submitted herewith on a  
separate sheet numbered as page 34.

IN THE SPECIFICATION:

Amend the paragraph bridging pages 6 and 7 (line 18 of page  
6 to line 14 of page 7) to read as follows:

The invention satisfies the above objects by providing a  
non-circular via and a method for cutting away material about a  
centerline for a non-circular via for PCBs. The method of

Date: August 16, 2002

AMENDMENT UNDER 37 C.F.R. § 1.111  
Appln. No. 09/786,787

PATENT APPLICATION

Cont  
B

drilling the non-circular via will be by cutting or removing material away about a centerline with a process such as laser ablation or plasma ablation. This type of cutting away of material about a centerline is sometimes referred to as ablation of material as noted above and allows lateral movements to effect noncircular patterns. This invention utilizes this noncircular approach in three forms, convoluted circle or a square, an extended elongated via up to three times the diameter in depth and a trenched via. The convoluted circle or non-circular via is a Profile Power Micro-via. The Profile via has any shape other than round or circular to create an increased length in circumference over a round or circular format. The Profile via can have a non-circular wave form shape centered on the circumference or pitch circle diameter or an irregular shape that is not based on the round or circular form. A Three Diameter via or a 1-3D via is a through hole having two component dimensions where one is the major dimension of 1-3 length and other minor dimension is its breadth having 1D diameter. Finally, a micro milled trench forming a co-axialised structure is used for noise protection EMI protection and is typically elongated longer than 3 times the diameter of the

Date: August 16, 2002

- 2 -

Atty. Dkt. No.: 2654-005US

AMENDMENT UNDER 37 C.F.R. § 1.111  
Appln. No. 09/786,787

PATENT APPLICATION

*Amended*  
standard circular Micro-via. The trench may have a length  
greater than two times the breadth of the trench.

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Date: August 16, 2002

- 3 -

Atty. Dkt. No.: 2654-005US

AMENDMENT UNDER 37 C.F.R. § 1.111  
Appln. No. 09/786,787

PATENT APPLICATION

REMARKS

Reconsideration and further examination of this application is hereby requested. Claims 1-28 are currently pending in the application.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached pages are captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE".

**A. ALLOWED SUBJECT MATTER**

Applicant appreciates the allowance of claims 25 and 26. Applicant also appreciates the indication that claim 24 recites allowable subject matter.

**B. THE ABSTRACT OF THE DISCLOSURE**

The Examiner has objected to the lack of an Abstract in this application. An Abstract of the Disclosure is submitted herewith on a separate sheet numbered as page 34.

**C. OBJECTION TO THE SPECIFICATION**

The Examiner has objected to the specification as not providing a verbatim antecedent basis for the limitation of "the trench having a length greater than two times a breadth of the trench" as recited in claim 2. This amendment provides for a verbatim reference to this feature in the specification.

Date: August 16, 2002

- 4 -

Atty. Dkt. No.: 2654-005US

AMENDMENT UNDER 37 C.F.R. § 1.111  
Appln. No. 09/786,787

PATENT APPLICATION

Accordingly, it is respectfully submitted that this rejection has been overcome by amendment.

D. REJECTION UNDER § 112, ¶ 1<sup>ST</sup>

The Examiner has rejected claim 2 under 35 U.S.C. § 112, ¶ 1<sup>st</sup> as not being supported by the specification in such a ways as to meet the written description requirement. In particular, the Examiner is concerned that the limitation of "the trench having a length greater than two times a breadth of the trench" is not adequately supported by the specification. This rejection is respectfully traversed based on the following arguments.

Applicant notes that this limitation was recited in claim 2 as originally filed. The text of an originally filed claim is itself a supporting disclosure that satisfies the written description requirement on its own behalf. See *Hyatt v. Boone* 136 F.3d 1348, 47 U.S.P.Q.2d 1128 (Fed. Cir. 1998), cert. denied, 119 S. Ct. 1032 (1999); see also *In re Smith*, 481 F.2d 910, 178 U.S.P.Q. 620 (C.C.P.A. 1973). Thus, for purposes of satisfying the written description requirement, there is no need for a separate, redundant disclosure elsewhere in the application.

Accordingly, Applicant respectfully requests that the Examiner carefully reconsider and withdraw the rejection under

Date: August 16, 2002

- 5 -

Atty. Dkt. No.: 2654-005US

AMENDMENT UNDER 37 C.F.R. § 1.111  
Appln. No. 09/786,787

PATENT APPLICATION

35 U.S.C. § 112, ¶ 1<sup>st</sup>.

**E. PRIOR ART REJECTIONS**

Claims 1-4, 8-23, 27, and 28 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Kiani et al. (U.S.P. 6,388,208). Claims 5-7 have been rejected under 35 U.S.C. § 103(a) as being obvious over Kiani et al. in view of Mattei (U.S.P. 5,522,132). These rejections are respectfully traversed based on the following arguments.

Applicant respectfully submits that it is not appropriate to apply the Kiani et al. patent as evidence against the present application. Kiani et al. does not qualify as prior art under section 102(e) of the Patent Statute, since the present application claims priority from a U.S. provisional application (appln. no. 60/099,730) that was filed Sept. 10, 1998. In contrast, Kiani et al. was filed no earlier than June 11, 1999.

Accordingly, Applicant respectfully submits that rejected claims 1-23, 27, and 28 are not taught nor fairly suggested by the prior art of record.

**F. CLOSING**

For the above reasons, Applicant respectfully submits that the application is in condition for allowance with claims 1-28. If there remain any issues that may be disposed of via a

Date: August 16, 2002

- 6 -

Atty. Dkt. No.: 2654-005US

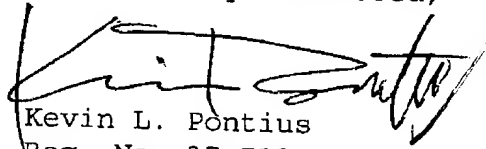
AMENDMENT UNDER 37 C.F.R. § 1.111  
Appln. No. 09/786,787

PATENT APPLICATION

telephonic interview, the Examiner is kindly invited to contact the undersigned at the local exchange given below.

The Director of Patents and Trademarks is authorized to charge any necessary fees, and conversely, deposit any credit balance, to Deposit Account No. 18-1579.

Respectfully submitted,



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Date: August 16, 2002

- 7 -

Atty. Dkt. No.: 2654-005US